

Leukaemia Immunophenotyping (Part 1) Programme
All Participant Report

Sample - 161704

Distribution - 161704

Closing Date - 31 October 2016

Participant ID - 42981

Date Issued - 11 October 2016

Trial Comments

This trial was issued to 282 participants.

Sample Comments

The sample was manufactured by UK NEQAS using a sample of blood from a leukaemia patient which was stabilised and added to a stabilised unit of whole blood.

Results and Performance

Overall Performance Grade (Core Antigens Only)	Performance Status for this Sample	Performance Status Classification Over 6 Sample Period	
		Satisfactory (Grades A-C)	Critical (Grades D-G)
A	Satisfactory	6	0

Please note performance monitoring for this programme is semi-qualitative and is based on the overall performance grade obtained from the consensus immunophenotype on the core antigens. **The robust statistics and z-scores provided below are related to technical performance on individual antigens and are not used for performance monitoring.** Derivation of z-scores requires normally distributed data and the results for this programme vary between normal and abnormal distribution based on the antigens and on a sample to sample basis. Therefore z-scores for antigens with expressions at the extremes of the results scale (around 0% and 100%) may not truly reflect the performance of the antigen and **all z-scores should be viewed as for information purposes only.**

Antigen	Your Results (%)	Your Result Antigen Expression (Positive/Negative)	Consensus Antigen Expression (Positive/Negative)	Robust Mean (%)	Robust SD (%)
CD2	3.00	-	-	17.65	12.87
CD3	100.00	+	+	96.86	3.32
CD5	100.00	+	+	96.62	3.48
CD13	0.00	-	-	0.00	0.00
CD19	0.00	-	-	0.16	0.18
CD20	0.00	-	-	0.54	0.61
CD10	0.00	-	-	0.00	0.00
CD4	100.00	+	+	92.78	6.00
CD7	0.00	-	-	15.74	13.30
CD8	0.00	-	-	3.97	3.16
CD25			-	0.00	0.00
CD45	100.00	+	+	100.00	0.00
HLADR			-	3.09	2.80
CD1a			-	0.00	0.00
CD34	0.00	-	-	0.00	0.00
CD56			-	0.16	0.18
CD38			-	8.04	7.71
TCR ab			+	94.31	5.83
TCR gd			-	0.00	0.00
CD26	4.00	+	-	9.04	9.01

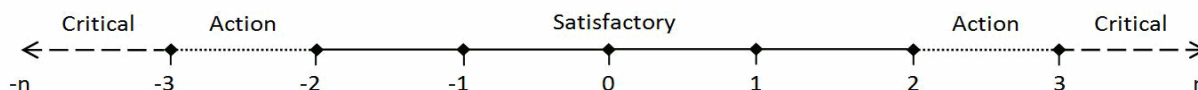
Leukaemia Immunophenotyping (Part 1) Programme

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Antigen	z Score*	Performance Status for this Sample	Performance Status Classification Over 6 Sample Period		
			Satisfactory	Action	Critical
CD19	-0.89	Satisfactory	6	0	0
TCR ab		Action			
CD1a		Action			
CD5	0.97	Satisfactory	5	1	0
CD2	-1.14	Satisfactory	5	0	1
CD10	0.00	Satisfactory			
CD25		Action			
CD7	-1.18	Satisfactory			
TCR gd		Action			
CD20	-0.89	Satisfactory	6	0	0
CD8	-1.26	Satisfactory			
CD34	0.00	Satisfactory			
CD56		Action			
CD4	1.20	Satisfactory			
CD45		Action			
CD3	0.95	Satisfactory	6	0	0
CD38		Action			
CD13	0.00	Satisfactory	6	0	0
HLADR		Action			
CD26	-0.56	Satisfactory			

***z Score Limits Definitions**

Please note the scale below is applicable to the tables above and to the z score histograms and Shewhart control charts that follow. It is not applicable to the Cusum control charts.



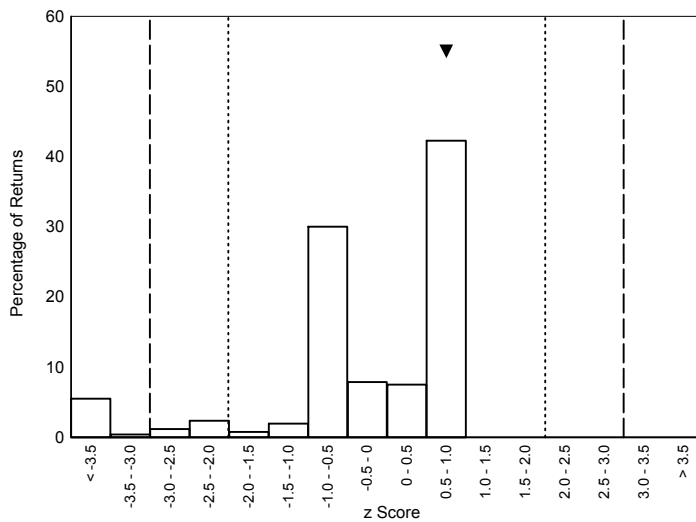
Leukaemia Immunophenotyping (Part 1) Programme

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Histograms of Participant z Scores

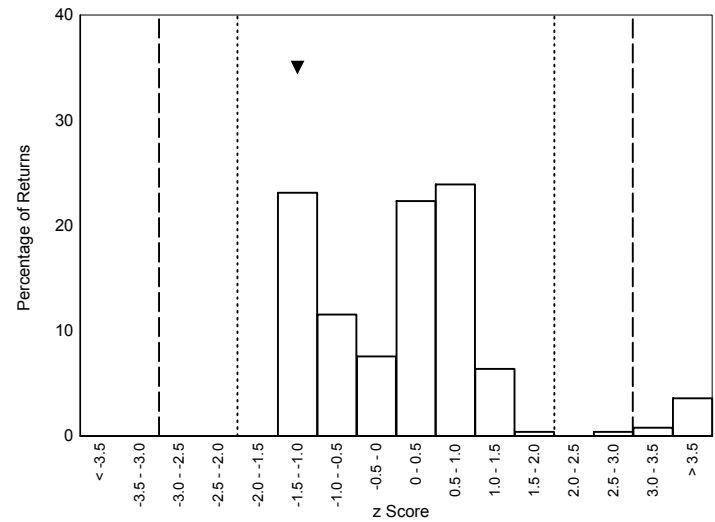
Percentage Values (%) - CD3

Please note ▼ denotes your result



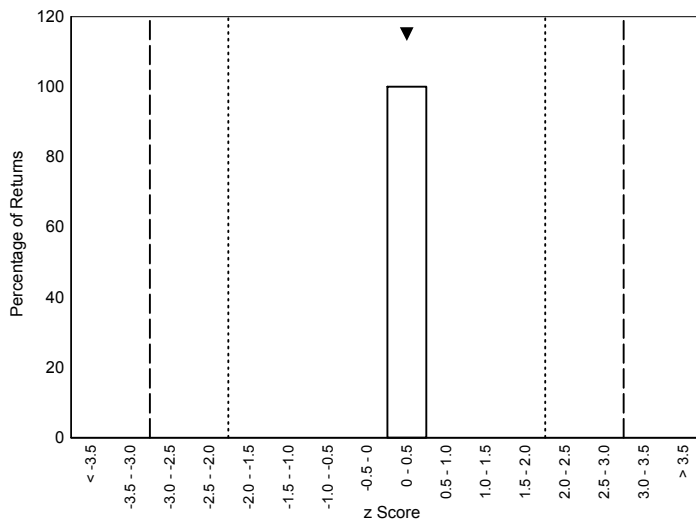
Percentage Values (%) - CD2

Please note ▼ denotes your result



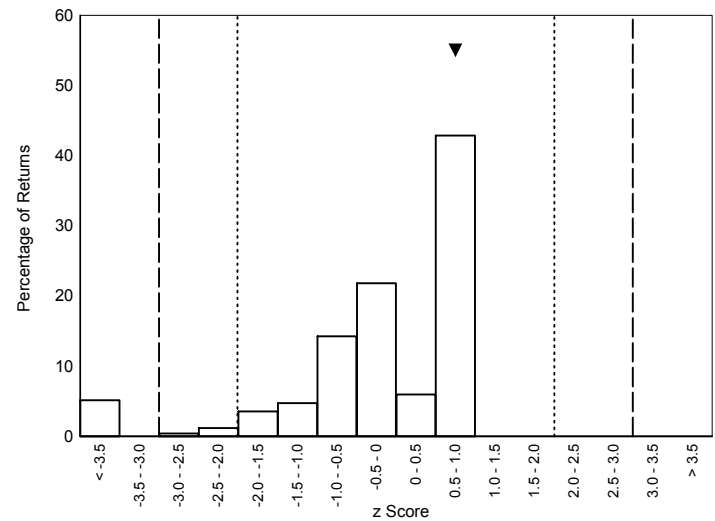
Percentage Values (%) - CD13

Please note ▼ denotes your result



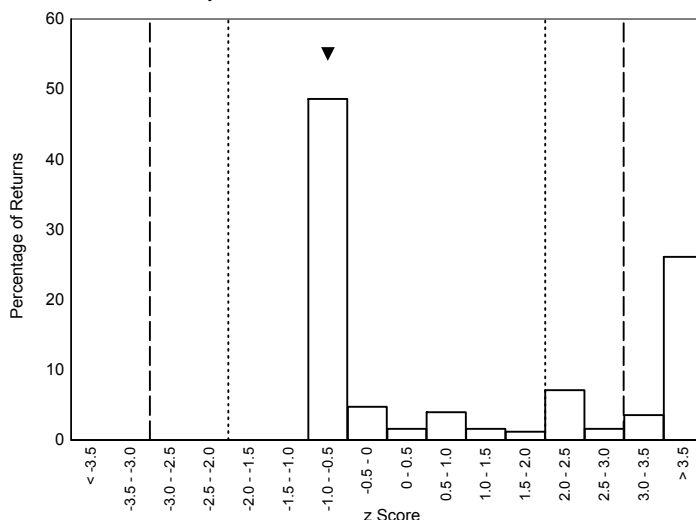
Percentage Values (%) - CD5

Please note ▼ denotes your result



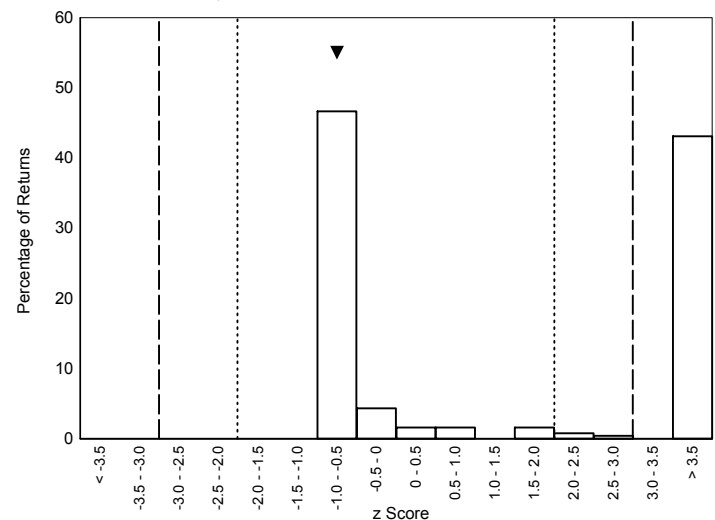
Percentage Values (%) - CD20

Please note ▼ denotes your result



Percentage Values (%) - CD19

Please note ▼ denotes your result



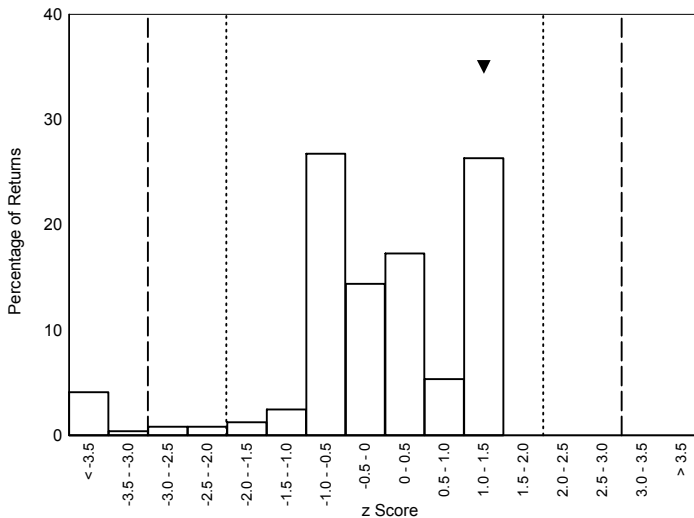
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Histograms of Participant z Scores

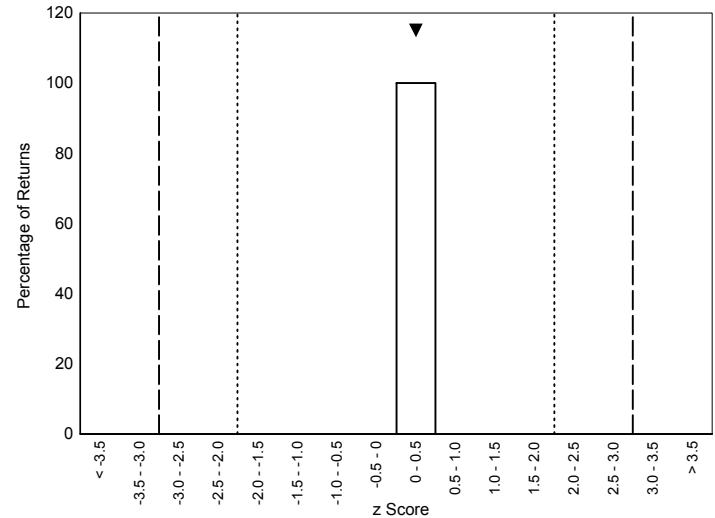
Percentage Values (%) - CD4

Please note ▼ denotes your result



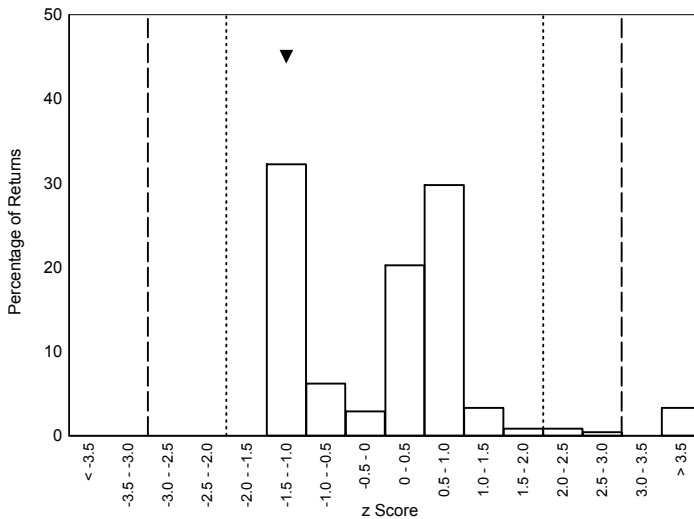
Percentage Values (%) - CD10

Please note ▼ denotes your result



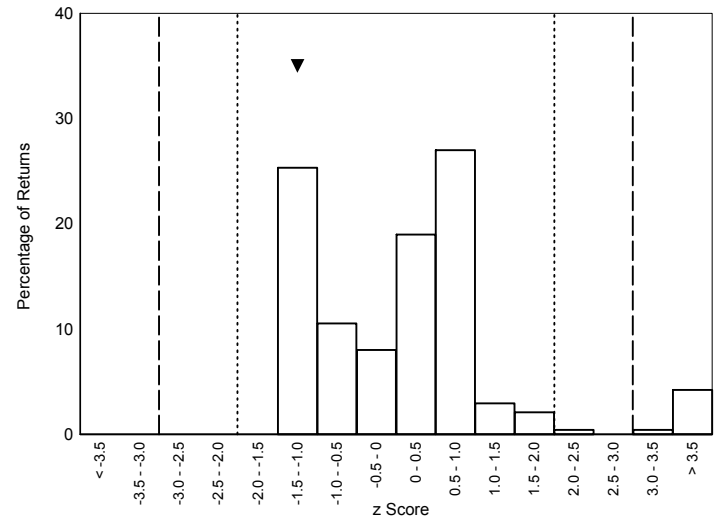
Percentage Values (%) - CD8

Please note ▼ denotes your result



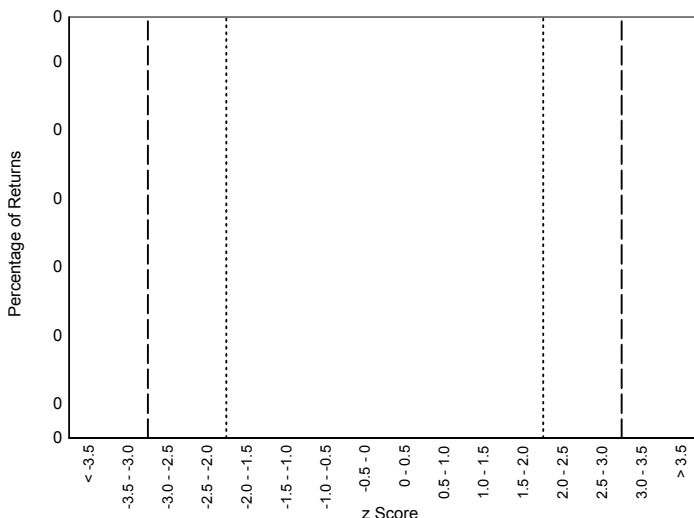
Percentage Values (%) - CD7

Please note ▼ denotes your result



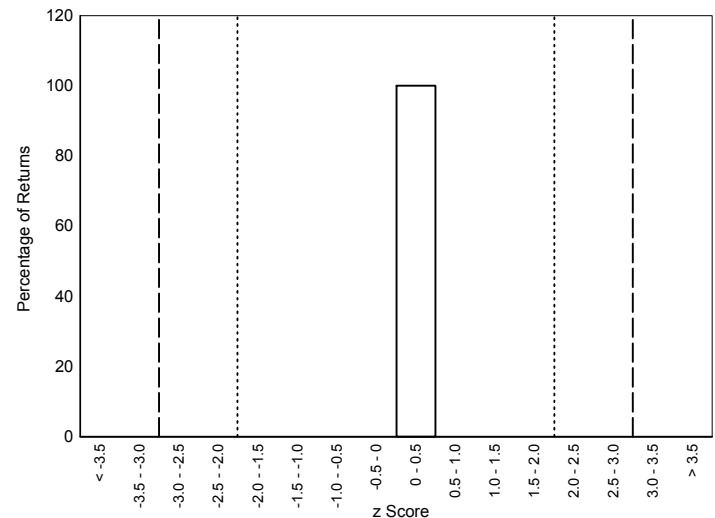
Percentage Values (%) - CD45

Please note ▼ denotes your result



Percentage Values (%) - CD25

Please note ▼ denotes your result



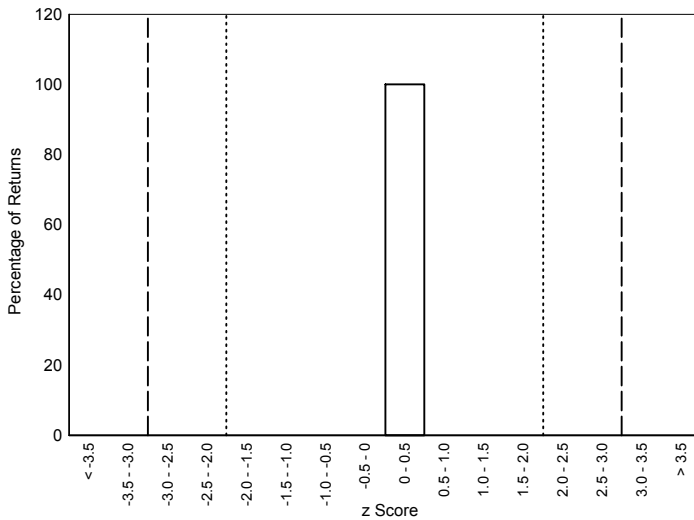
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Histograms of Participant z Scores

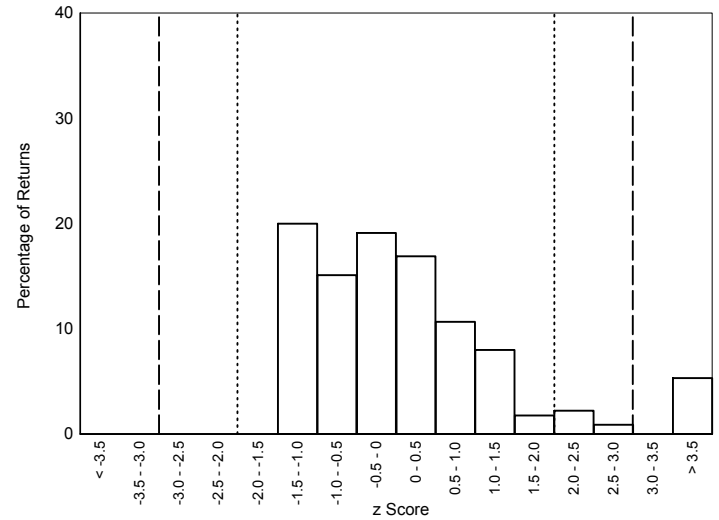
Percentage Values (%) - CD1a

Please note ▼ denotes your result



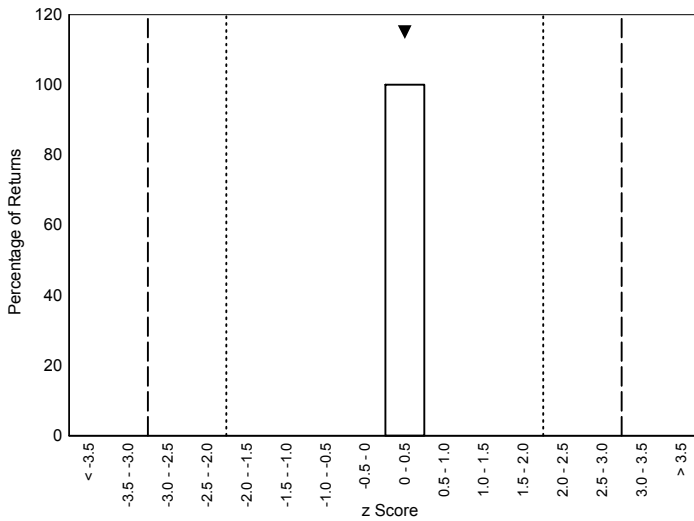
Percentage Values (%) - HLADR

Please note ▼ denotes your result



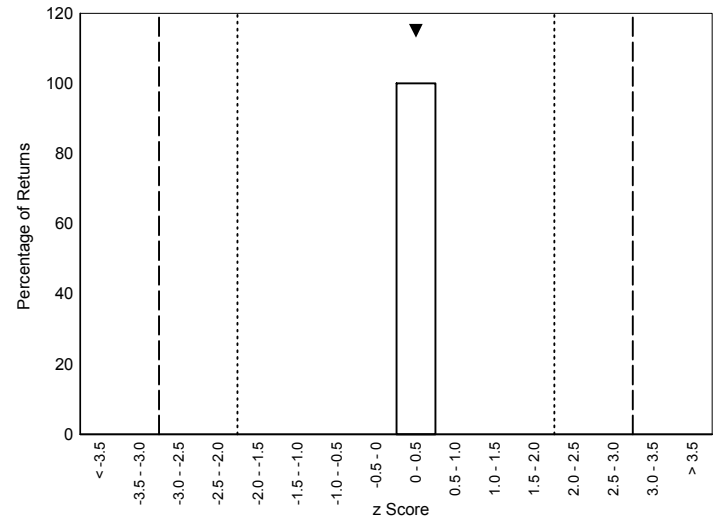
Percentage Values (%) - Myeloperox

Please note ▼ denotes your result



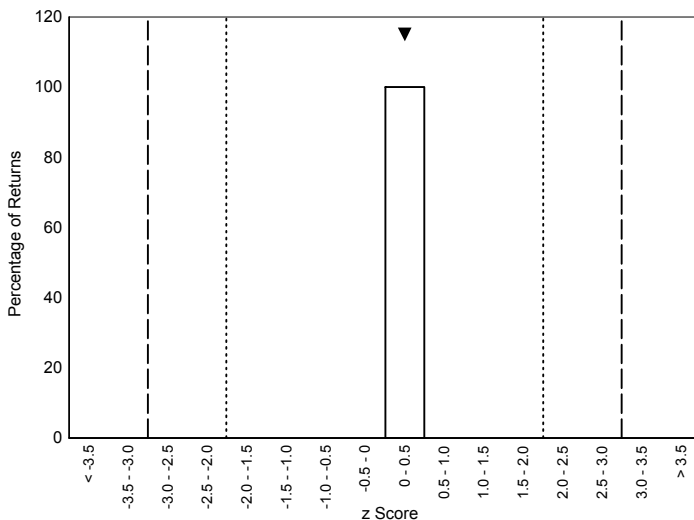
Percentage Values (%) - CD79a

Please note ▼ denotes your result



Percentage Values (%) - CD34

Please note ▼ denotes your result



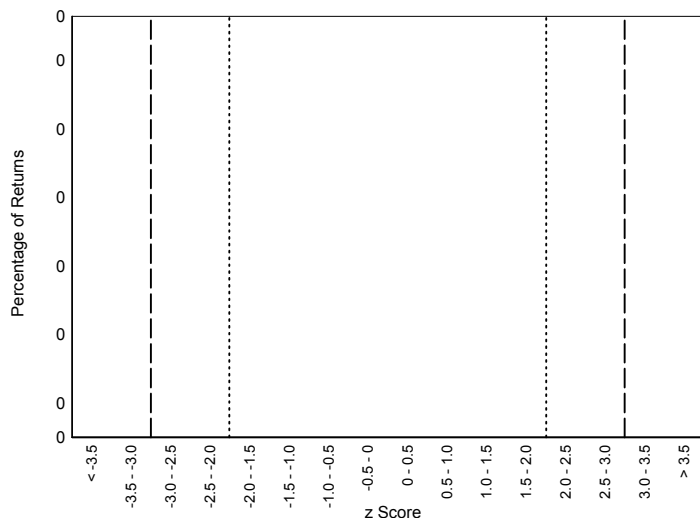
Leukaemia Immunophenotyping (Part 1) Programme

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Histograms of Participant z Scores

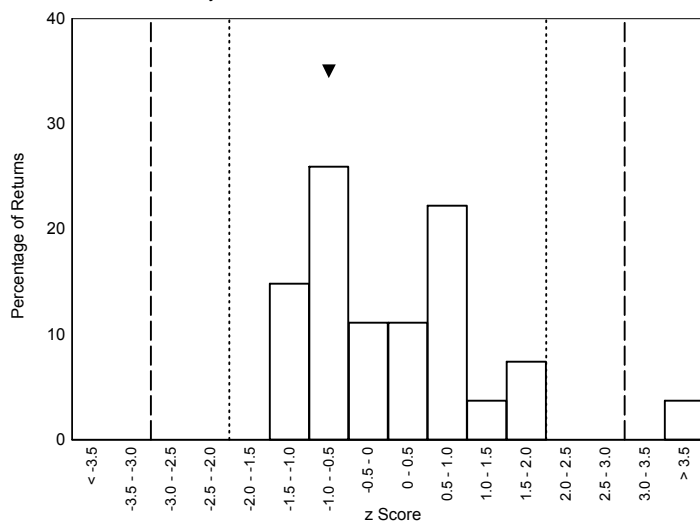
Percentage Values (%) - Cyto CD3

Please note ▼ denotes your result



Percentage Values (%) - CD26

Please note ▼ denotes your result



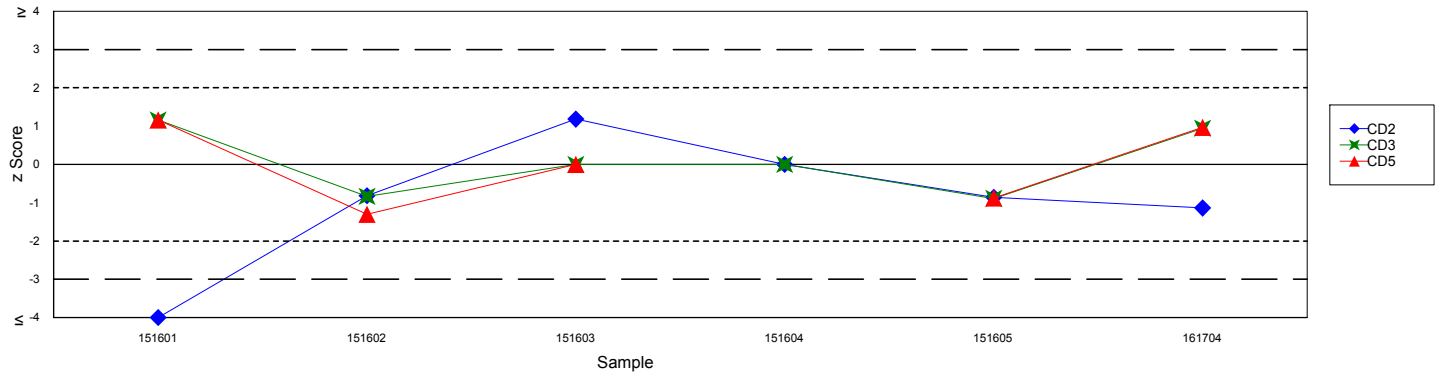
Leukaemia Immunophenotyping (Part 1) Programme

Sample - 161704

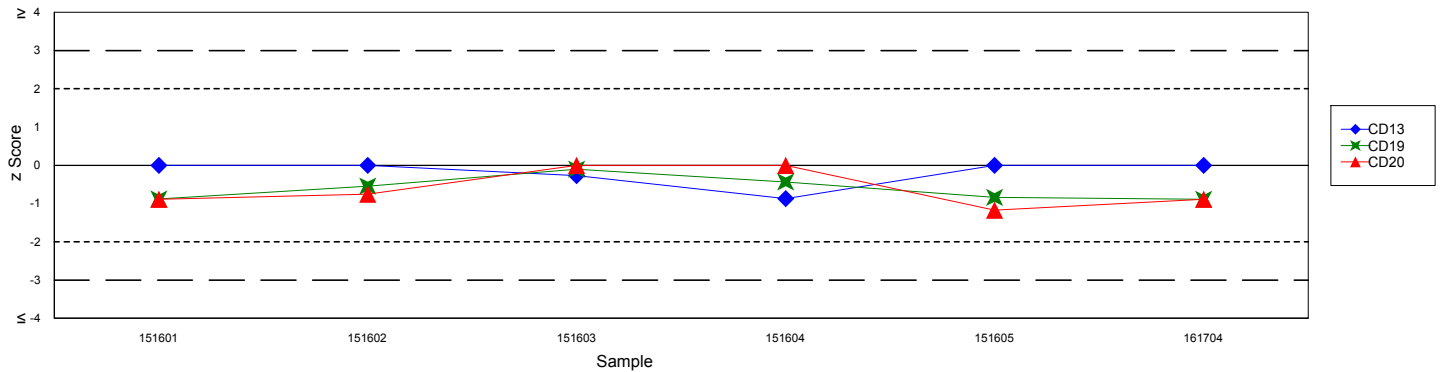
Shewhart Control Charts

(Please note each data point represents a single sample)

Percentage Values (%)



Percentage Values (%)



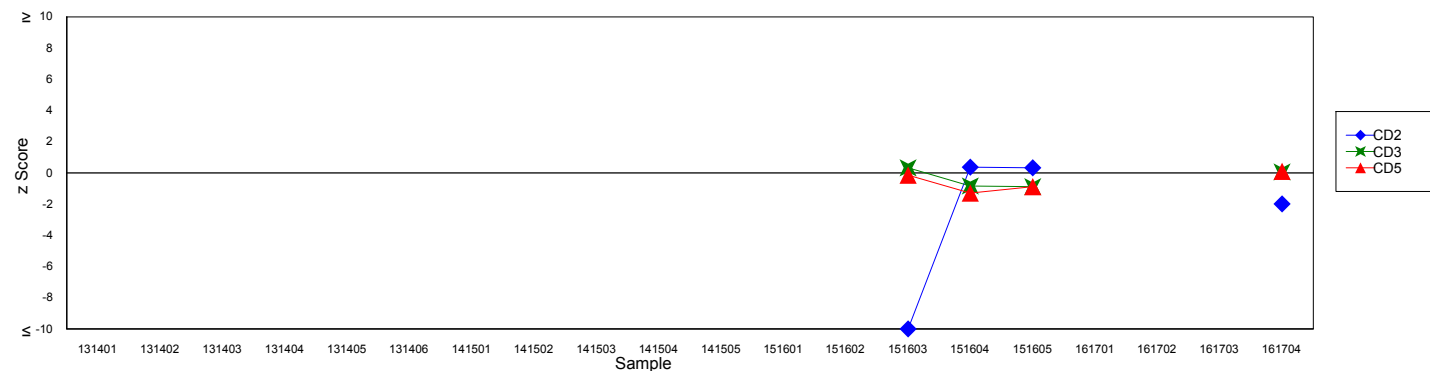
Leukaemia Immunophenotyping (Part 1) Programme

Sample - 161704

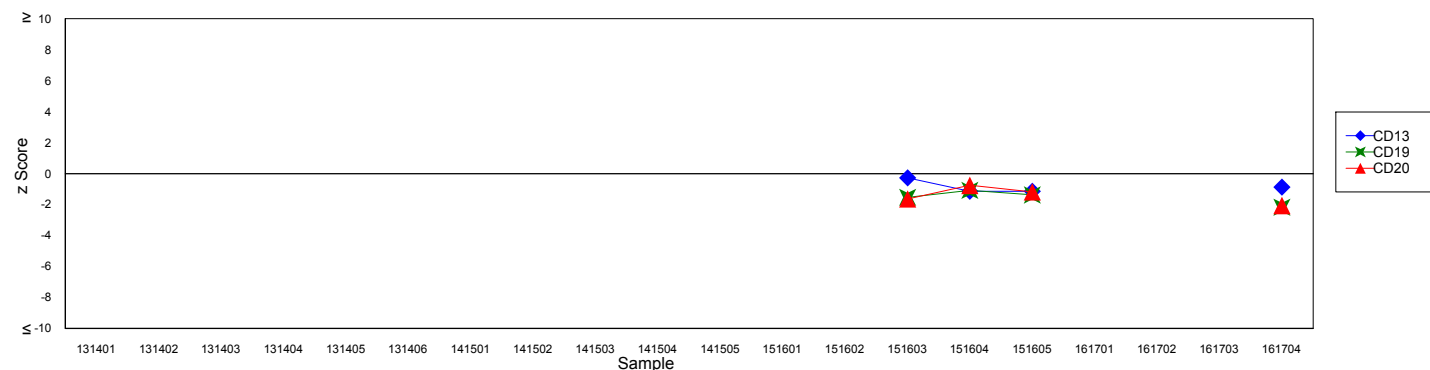
Cusum Control Charts

(Please note each data point represents the sum of the z scores of the current sample and the two previous samples)

Percentage Values (%)



Percentage Values (%)



Leukaemia Immunophenotyping (Part 1) Programme

Sample - 161704

Antibody Manufacturer Specific Statistics

(Please note only groups of >20 returns are displayed)

CD2	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	BD Biosciences	142	16.2	13.5
	Beckman Coulter	81	20.0	10.8

CD3	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	BD Biosciences	146	97.2	3.0
	Beckman Coulter	84	96.6	3.6

CD5	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	BD Biosciences	145	96.7	3.5
	Beckman Coulter	81	96.3	3.6

CD10	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	BD Biosciences	126	0.0	0.0
	Beckman Coulter	81	0.0	0.0

CD13	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	BD Biosciences	142	0.0	0.0
	Beckman Coulter	77	0.3	0.3

CD19	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	BD Biosciences	120	0.2	0.2
	Beckman Coulter	108	0.2	0.2

CD4	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	BD Biosciences	134	92.8	6.3
	Beckman Coulter	78	92.6	5.0

Leukaemia Immunophenotyping (Part 1) Programme

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Antibody Manufacturer Specific Statistics

(Please note only groups of >20 returns are displayed)

CD7			
Percentage Values (%)			
Method	Returns	Robust Mean	Robust SD
BD Biosciences	127	14.3	13.4
Beckman Coulter	79	18.0	10.9

CD8			
Percentage Values (%)			
Method	Returns	Robust Mean	Robust SD
BD Biosciences	132	3.9	3.4
Beckman Coulter	82	4.3	2.2

CD25			
Percentage Values (%)			
Method	Returns	Robust Mean	Robust SD
BD Biosciences	134	0.0	0.0
Beckman Coulter	57	0.0	0.1

CD45			
Percentage Values (%)			
Method	Returns	Robust Mean	Robust SD
BD Biosciences	135	100.0	0.0
Beckman Coulter	75	100.0	0.0

CD34			
Percentage Values (%)			
Method	Returns	Robust Mean	Robust SD
BD Biosciences	29	0.0	0.0

HLADR			
Percentage Values (%)			
Method	Returns	Robust Mean	Robust SD
BD Biosciences	134	2.8	2.6
Beckman Coulter	52	3.7	3.1

CD20			
Percentage Values (%)			
Method	Returns	Robust Mean	Robust SD
BD Biosciences	145	0.5	0.5
Beckman Coulter	72	0.8	0.9

Leukaemia Immunophenotyping (Part 1) Programme

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Antibody Manufacturer Specific Statistics

(Please note only groups of >20 returns are displayed)

CD1a	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	BD Biosciences	83	0.0	0.0
	Beckman Coulter	63	0.0	0.0

CD56	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	BD Biosciences	20	0.0	0.0

TCR gd	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
BD Biosciences		21	0.0	0.0

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Antibody Fluorochrome Specific Statistics

(Please note only groups of >20 returns are displayed)

CD2	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	21	22.0	8.6
FITC	98	17.5	10.2
PE	45	17.7	13.5
PE-CY7	55	17.8	13.4

CD3	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	APC	42	97.3	3.1
	FITC	44	95.6	3.4
	PerCP-CY5.5	26	99.1	1.0

CD5	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	APC	42	96.8	3.3
	FITC	48	95.5	3.3
	PE	25	95.3	1.9
	PE-CY7	27	96.8	3.1
	PerCP-CY5.5	33	98.7	1.7

CD10	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	APC	52	0.0	0.0
	FITC	27	0.0	0.0
	PE	93	0.0	0.0
	PE-CY7	31	0.0	0.0

CD13	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	PE	169	0.0	0.0
	PE-CY7	22	0.1	0.1

Leukaemia Immunophenotyping (Part 1) Programme

Sample - 161704

Antibody Fluorochrome Specific Statistics

(Please note only groups of >20 returns are displayed)

CD19	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	APC	38	0.9	0.9
	ECD	21	1.4	1.3
	PE	29	1.6	1.5
	PE-CY7	77	0.0	0.0
	PerCP-CY5.5	20	0.4	0.5

CD4	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	APC	34	94.2	5.5
	FITC	52	91.4	6.1
	Pacific Orange	21	94.3	6.3
	PC5.5	20	98.1	2.3
	PE	48	91.2	4.6
	PE-CY7	25	93.3	6.0

CD7	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	APC	29	17.1	12.0
	FITC	81	15.0	13.1
	PE	80	17.3	12.5

CD8	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	APC	22	1.8	2.1
	FITC	51	4.8	1.8
	PE	61	5.5	1.8
	PE-CY7	26	3.3	3.4

CD25	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	APC	33	0.0	0.0
	FITC	32	0.0	0.0
	PE	88	0.0	0.0
	PE-CY7	23	0.0	0.0

Leukaemia Immunophenotyping (Part 1) Programme

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Antibody Fluorochrome Specific Statistics

(Please note only groups of >20 returns are displayed)

CD45	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	APC-H7	32	100.0	0.0
	PerCP	26	100.0	0.0
	V450	47	100.0	0.0

HLADR	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	FITC	78	3.3	2.4
	Pacific Orange	26	2.9	2.7
	PC5.5	20	1.2	1.5
	PE-CY7	22	4.6	3.7

CD20	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	APC	23	1.2	1.5
	FITC	61	1.4	1.5
	Pacific Orange	38	0.0	0.0
	PC5.5	27	0.0	0.0
	PE	20	1.4	1.6

CD1a	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
	APC	39	0.0	0.0
	FITC	29	0.0	0.0
	PE	112	0.0	0.0

CD56	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
PE		20	0.9	1.0

CD26	Percentage Values (%)			
	Method	Returns	Robust Mean	Robust SD
PE		21	10.0	8.9

Information with respect to compliance with standards BS EN ISO/IEC 17043:2010

4.8.2 a) The proficiency testing provider for this programme is:

UK NEQAS for Leucocyte Immunophenotyping

Pegasus House, 4th Floor Suite

463A Glossop Road

Sheffield, S10 2QD

United Kingdom

Tel: +44 (0) 114 267 3600, Fax: +44 (0) 114 267 3601

e-mail: nicola.rose@ukneqasli.co.uk

4.8.2 b) The coordinators of UK NEQAS LI programmes are Prof David Barnett and Mr Liam Whitby.

4.8.2 c) Person(s) authorizing this report:

Prof David Barnett, Director or Mr Liam Whitby, Operations Manager of UK NEQAS LI

4.8.2 d) No activities in relation to this EQA exercise were subcontracted.

4.8.2 g) The UK NEQAS LI Confidentiality Policy can be found in the Quality Manual which is available by contacting the UK NEQAS LI office. Participant details, their results and their performance data remain confidential unless revealed to the relevant NQAAP when a UK participant is identified as having performance issues.

4.8.2 i) All EQA samples are prepared in accordance with strict Standard Operational Procedures by trained personnel proven to ensure homogeneity and stability. Where appropriate/possible EQA samples are tested prior to issue. Where the sample(s) issued is stabilised blood or platelets, pre and post stability testing will have proved sample suitability prior to issue.

4.8.2 l), n), o), r) & s) Please refer to the UK NEQAS LI website at www.ukneqasli.co.uk for detailed information on each programme including the scoring systems applied to assess performance (for BS EN ISO/IEC 17043:2010 accredited programmes only). Where a scoring system refers to the 'consensus result' this means the result reported by the majority of participants for that trial issue. Advice on the interpretation of statistical analyses and the criteria on which performance is measured is also given. Please note that where different methods/procedures are used by different groups of participants these may be displayed within your report, but the same scoring system is applied to all participants irrespective of method/procedure used.

4.8.2 m) We do not assign values against reference materials or calibrants.

4.8.2 q) Details of the programme designs as authorized by The Steering Committee and Specialist Advisory Group can be found on our website at www.ukneqasli.co.uk. The proposed trial issue schedule for each programme is also available.

4.8.2 t) If you would like to discuss the outcomes of this trial issue, please contact UK NEQAS LI using the contact details provided. Alternatively, if you are unhappy with your performance classification for this trial, please find the appeals procedure at www.ukneqasli.co.uk/contact-us/appeals-and-complaints/



UK NEQAS for Leucocyte Immuno-phenotyping (UK NEQAS LI) based in the Royal Hallamshire Hospital, Sheffield Teaching Hospitals NHS Foundation Trust, the University of Sheffield and Alexion (UK) are proud to announce the formation of the National Academy of Clinical Flow Cytometry.

These courses will build on the success of the three courses held in 2015, all of which were very well attended and received unanimously positive feedback.

This facility has been founded on an unrestricted educational grant from Alexion (UK) and will be based at the University of Sheffield. The aims of the Academy are to provide tuition from international experts to Healthcare Scientists performing clinical flow cytometric analysis and to ensure that these tests are performed at the highest standard. The academy will therefore have a positive benefit for the treatment and management of thousands of patients across the UK and beyond.

Paroxysmal Nocturnal Haemoglobinuria (PNH) testing course

This specific course aims to train scientists in the flow cytometric detection and monitoring of Paroxysmal Nocturnal Haemoglobinuria (PNH).

It is a rare disease, occurring at any age, with a prevalence of 2 cases per million and can be fatal if not detected and treated correctly.

This initiative will aim to improve detection and monitoring of PNH in clinical flow cytometry laboratories within the National Health Service. It is envisaged that by improving both the knowledge and skills of healthcare scientists there will be a dramatic improvement in the diagnosis and monitoring of PNH. This will lead to improved standardization of testing procedures at a National and ultimately International level.

Faculty

The National Academy, led by Professor David Barnett and his UK NEQAS LI team, will be based within the University of Sheffield. It has a faculty of internationally respected scientists who will teach clinical healthcare scientists practicing in UK hospitals on how to implement best practices for PNH testing.

Course details

Each course will be specifically targeted at an instrument type currently in use for clinical flow cytometry and will be delivered over 3 days by international experts in the field. All courses will feature classroom and practical sessions that will ensure that students receive the best tuition in the flow cytometric detection of PNH.

Registration

Via on-line form on our website at www.sheffield.ac.uk/nacfc

Registration for the course costs £200 and includes refreshments and lunch each day of the course, and post-course practical assessments.

Course dates

**Beckman Coulter
Flow Cytometer Course
5th - 7th December 2016**
(BC Navios Practical Sessions)

Sponsor



Jointly hosted by

UK NEQAS

Leucocyte Immunophenotyping

Sheffield Teaching Hospitals

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University
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